

## GENERAL NOTES

1. All railings shall be fabricated and erected as indicated on the Plans.
2. Posts shall be set perpendicular to top of parapet. For post spacing see Plans. (Maximum 8'-0" Spacing).
3. Rails shall be parallel to the grade of the roadway. Rail section shall be attached to as many posts as possible, but not less than three (except where indicated otherwise on Plans).
4. The center line of any splice and/or expansion joint shall be located at least 2'-0" away from center line of a post except where indicated otherwise on Plans. Expansion and/or splice joints for each strand of two strand railing shall be placed in the same location and in the same panel.
5. Material for rails, posts (including bases), splices and clamp bars shall conform to ASTM B 221, Alloy 6061 T6. Rails shall have a mill finish. Posts shall have a mill finish except that any sawed surfaces shall have a finish comparable to 250 Microinch. Rails and splices shall conform to ASTM B 221, Alloy 6351 T5 for chemical composition only.
6. Material for rail end plates shall conform to ASTM B 209, Alloy 6061 T6. Material for cast rail end caps shall meet the requirements of B 108, Alloy SG 70A, S5A; and S7A for chemical composition only.
7. Material for anchor studs shall meet the requirements of A 276, Type 304 Stainless Steel, annealed, hot finished, ultimate strength 70 000 psi, 20 percent minimum elongation. Threads may be rolled or cut.
8. Material for heavy hex nuts shall conform to ASTM B 211, Alloy 6061 T6 or 6262 T9.
9. Material for steel nuts shall conform to ASTM A 307.
10. Material for aluminum washers shall be ALCLAD conforming to ASTM B 209, Alloy 6061 T6 or 7075 T6.
11. Material for rivets shall conform to ASTM B 316, Alloy 6061 T6 and 6053 T61 for chemical composition only, and MIL-R-1150 in all other respects. The rivets shall be button head and cone point and shall be cold driven.
12. Bolts may be used in lieu of rivets for connecting post to post base plate. Material for bolts shall be of stainless steel conforming to ASTM A 193 Identification Symbol B8. Nuts shall conform to ASTM A 194 Type 8 or 8 NA. Material for washers shall conform to ASTM A 276, Type 304. Specified Specified torque level for bolts connecting base plate to post shall be 150 to 175 ft·lb. Burr threads by centerpunching at top of nut. Punch marks shall be spaced at 120 degrees.
13. Material for clamp bar tap screws and cap screws shall be stainless steel conforming to ASTM A 193, Identification Symbol B8.
14. Material for anchor plates shall be steel conforming to ASTM A 709, Grade 36.
15. Material for pins shall be Alloy 6061 T6 and pins shall be press fit.
16. Post bases shall sit on a single thickness of preformed fabric bearing pad conforming to 910.02.03. The pad shall contact the entire bottom surface of the base plate with not more than  $\frac{1}{8}$  inch protruding beyond the base plate on any side.
17. Weld metal for the welded base plate shall be 5356 A-I.

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<i>E. S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES	
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9-24-96	.
FHWA APPROVAL 8-16-00	.
DATE: 2-25-77	1-22-01

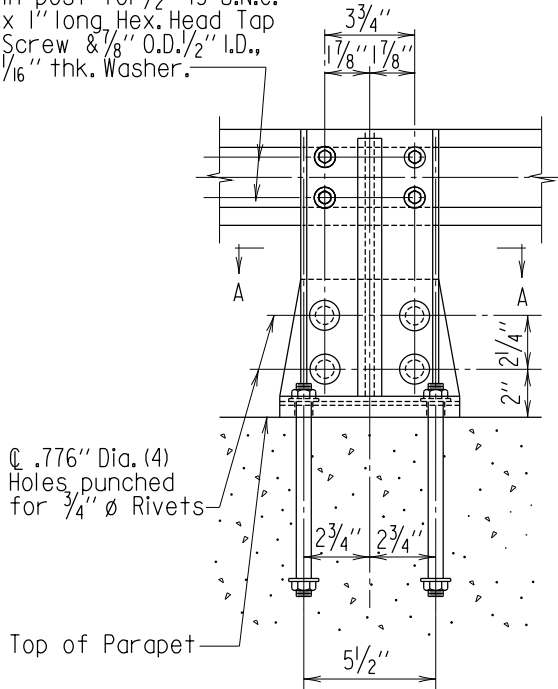
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### GENERAL NOTES ALUMINUM BRIDGE RAILING

STANDARD NO. BR-SS(5.01)76-35

SHEET 1 OF 7

$\phi \frac{9}{16}'' \times \frac{13}{16}''$  Vert. slots  
 in post for  $\frac{1}{2}''-13$  U.N.C.  
 x 1" long Hex. Head Tap  
 Screw &  $\frac{7}{8}''$  O.D.  $\frac{1}{2}''$  I.D.,  
 $\frac{1}{16}''$  thk. Washer.



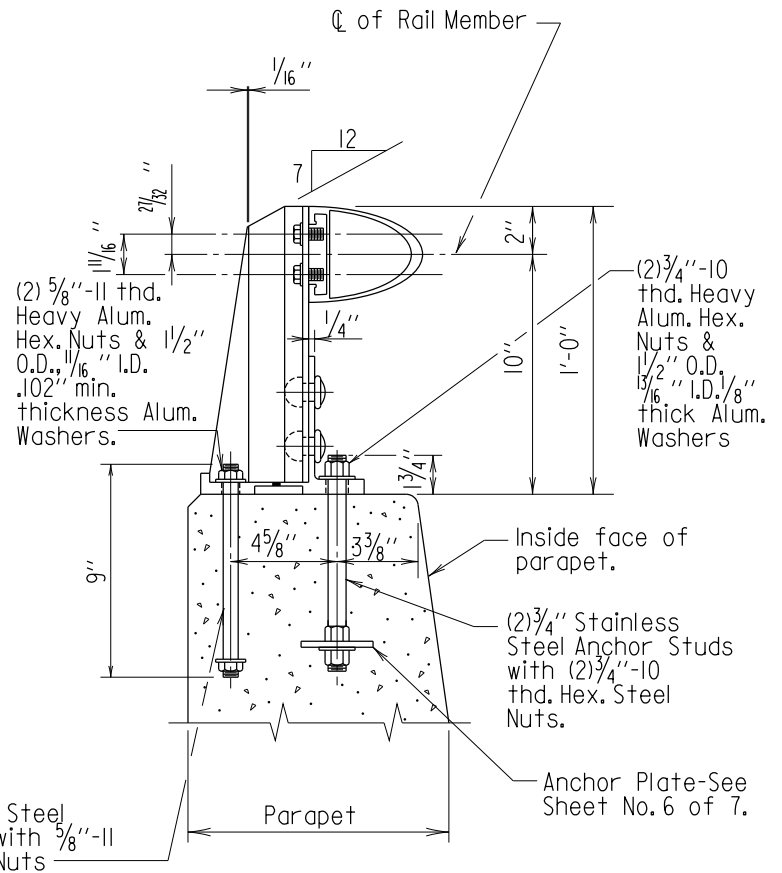
$\phi .776''$  Dia. (4)  
 Holes punched  
 for  $\frac{3}{4}'' \phi$  Rivets

Top of Parapet

(2)  $\frac{5}{8}''$  Stainless Steel  
 Anchor Studs with  $\frac{5}{8}''-11$   
 thd. Hex. Steel Nuts

### OUTSIDE ELEVATION

Scale:  $1\frac{1}{2}''=1'-0''$



$\phi$  of Rail Member

### SECTION

Scale:  $1\frac{1}{2}''=1'-0''$

Note:  
 For all exposed and/or sawed edges -  
 break all edges -(no radius involved).

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6-8-93	.
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DATE: 2-25-77	9-24-96

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ONE STRAND  
 ALUMINUM BRIDGE RAILING

STANDARD NO. BR-SS(5.01)-76-35

SHEET 2 OF 7

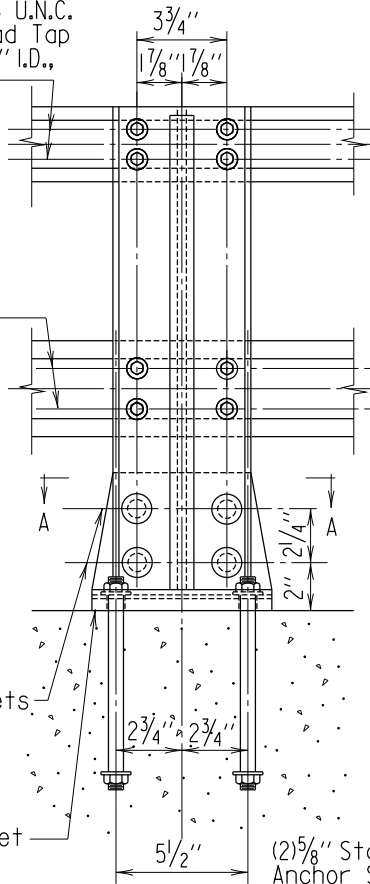
SUPER-RAILING BARRIER

$\phi \frac{7}{16}'' \times \frac{1}{16}''$  Vert. slots  
 in post for  $\frac{3}{8}''$ -16 U.N.C.  
 $\times \frac{7}{8}''$  long Hex. Head Tap  
 Screw &  $\frac{3}{4}''$  O.D.  $\frac{3}{8}''$  I.D.,  
 $\frac{1}{16}''$  thk. Washer.

$\phi \frac{9}{16}'' \times \frac{1}{16}''$   
 Vert. slots  
 in post for  
 $\frac{1}{2}''$ -13 U.N.C.  
 $\times 1''$  long Hex.  
 Head Tap  
 Screw &  $\frac{1}{8}''$  O.D.  
 $\frac{1}{2}''$  I.D.,  
 $\frac{1}{16}''$  thk. Washer.

$\phi .776''$  Dia. (4)  
 Holes punched  
 for  $\frac{3}{4}'' \phi$  Rivets.

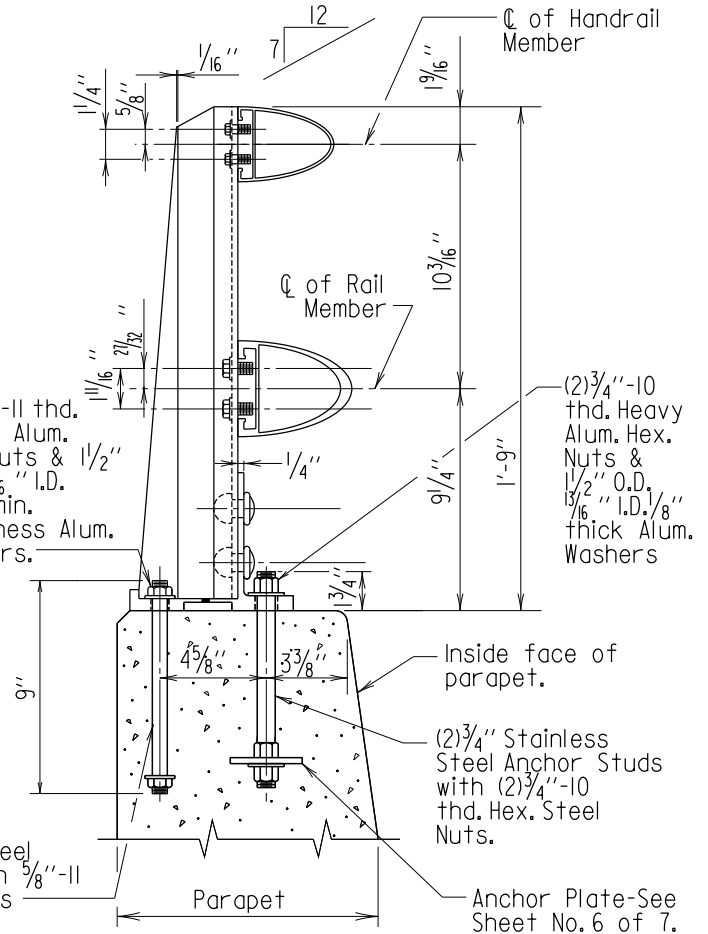
Top of Parapet



OUTSIDE ELEVATION

Scale:  $1\frac{1}{2}''=1'-0''$

(2)  $\frac{5}{8}''$ -11 thd.  
 Heavy Alum.  
 Hex. Nuts &  $\frac{1}{2}''$   
 O.D.  $\frac{1}{16}''$  I.D.  
 .102" min.  
 thickness Alum.  
 Washers.



SECTION

Scale:  $1\frac{1}{2}''=1'-0''$

Note:  
 For all exposed and/or sawed edges -  
 break all edges -(no radius involved).

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TWO STRAND  
 ALUMINUM BRIDGE RAILING

STANDARD NO. BR-SS(5.01)-76-35

SHEET 3 OF 7

SUPER-RAILING BARRIER

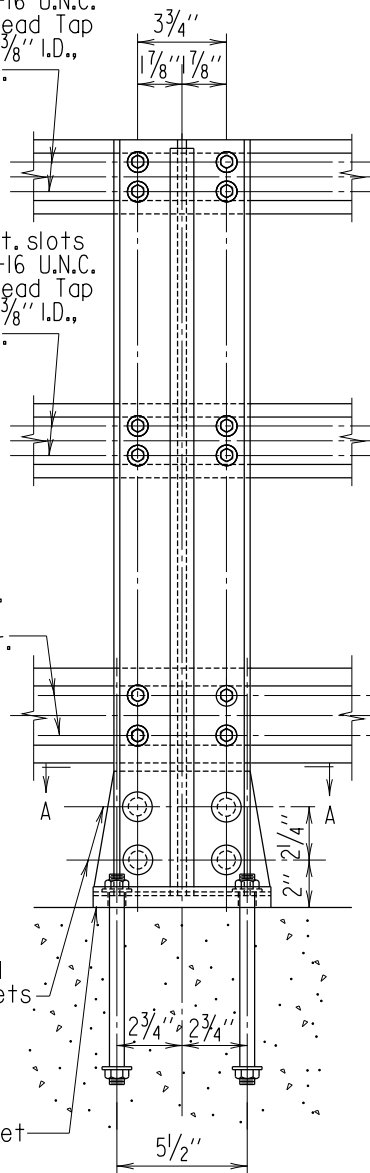
$\varnothing \frac{7}{16}'' \times \frac{11}{16}''$  Vert. slots  
 in post for  $\frac{3}{8}''$ -16 U.N.C.  
 $\times \frac{7}{8}''$  long Hex. Head Tap  
 Screw &  $\frac{3}{4}''$  O.D.  $\frac{3}{8}''$  I.D.,  
 $\frac{1}{16}''$  thk. Washer.

$\varnothing \frac{7}{16}'' \times \frac{11}{16}''$  Vert. slots  
 in post for  $\frac{3}{8}''$ -16 U.N.C.  
 $\times \frac{7}{8}''$  long Hex. Head Tap  
 Screw &  $\frac{3}{4}''$  O.D.  $\frac{3}{8}''$  I.D.,  
 $\frac{1}{16}''$  thk. Washer.

$\varnothing \frac{9}{16}'' \times \frac{13}{16}''$   
 Vert. slots  
 in post for  
 $\frac{1}{2}''$ -13 U.N.C.  
 $\times 1''$  long Hex.  
 Head Tap  
 Screw &  $\frac{7}{8}''$  O.D.  
 $\frac{1}{2}''$  I.D.,  
 $\frac{1}{16}''$  thk. Washer.

$\varnothing .776''$  Dia. (4)  
 Holes punched  
 for  $\frac{3}{4}'' \varnothing$  Rivets

Top of Parapet

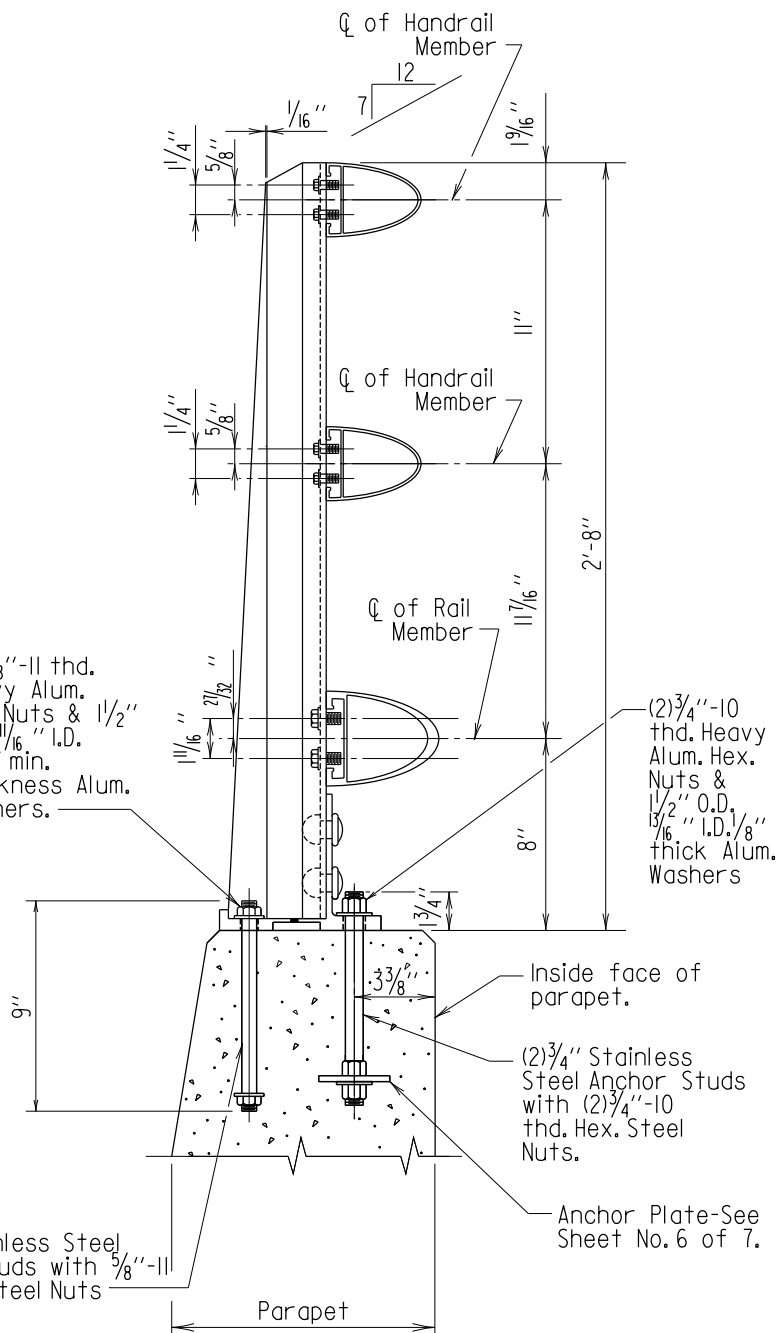


OUTSIDE ELEVATION

Scale:  $1\frac{1}{2}''=1'-0''$

(2)  $\frac{5}{8}''$ -11 thd.  
 Heavy Alum.  
 Hex. Nuts &  $\frac{1}{2}''$   
 O.D.,  $\frac{11}{16}''$  I.D.  
 .102" min.  
 thickness Alum.  
 Washers.

(2)  $\frac{5}{8}''$  Stainless Steel  
 Anchor Studs with  $\frac{5}{8}''$ -11  
 thd. Hex. Steel Nuts



SECTION

Scale:  $1\frac{1}{2}''=1'-0''$

Note:

For all exposed and/or sawed edges - break all edges -(no radius involved).

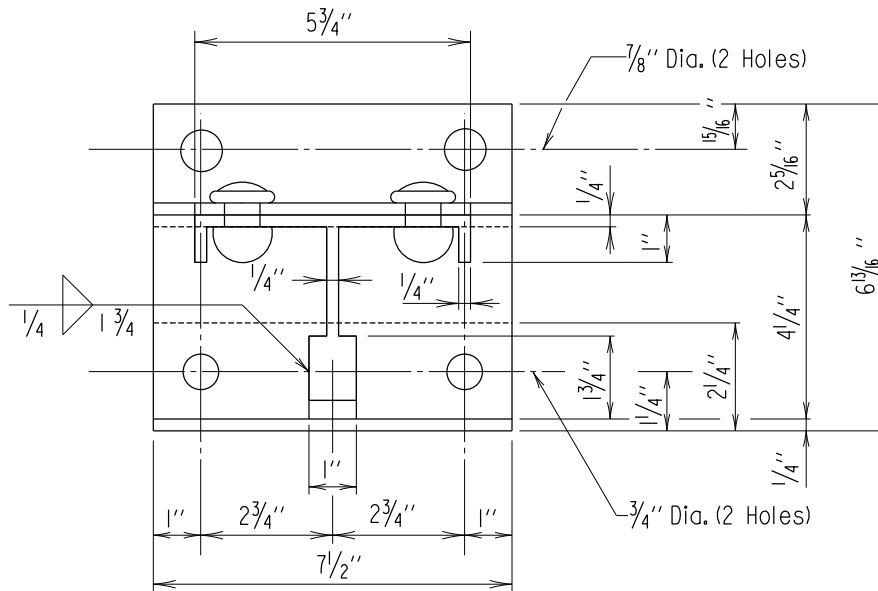
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<i>E. S. Fisher</i>	DIRECTOR
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THREE STRAND  
 ALUMINUM BRIDGE RAILING

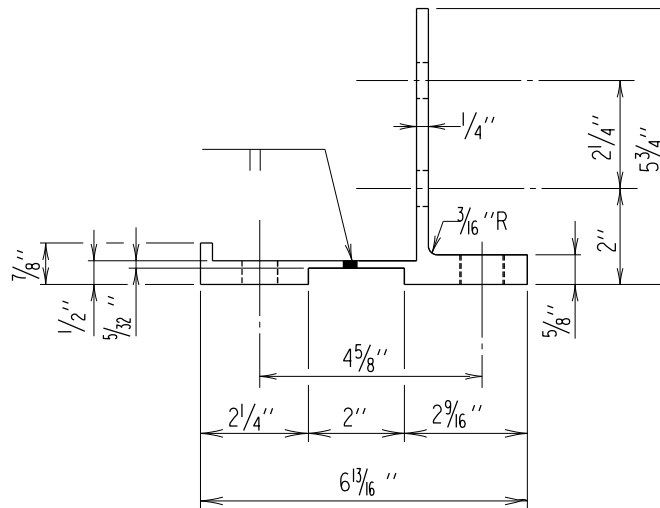
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SHEET 4 OF 7



### SECTION A-A

Scale: 3"=1'-0"



Base plate may be furnished in one piece extrusion, or in two extrusions welded together as shown.

Note:  
Post not shown.

### BASE PLATE DETAIL

Scale: 3"=1'-0"

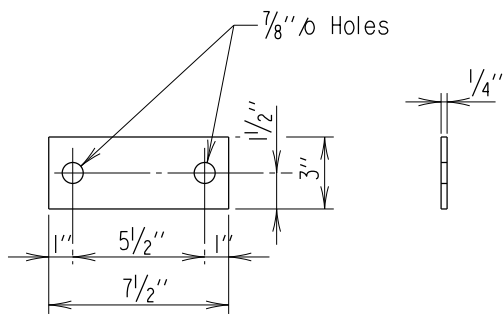
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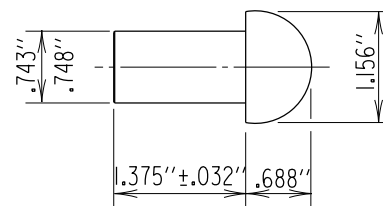
BASE PLATE DETAILS  
ALUMINUM BRIDGE RAILING

STANDARD NO. BR-SS(5.01)-76-35

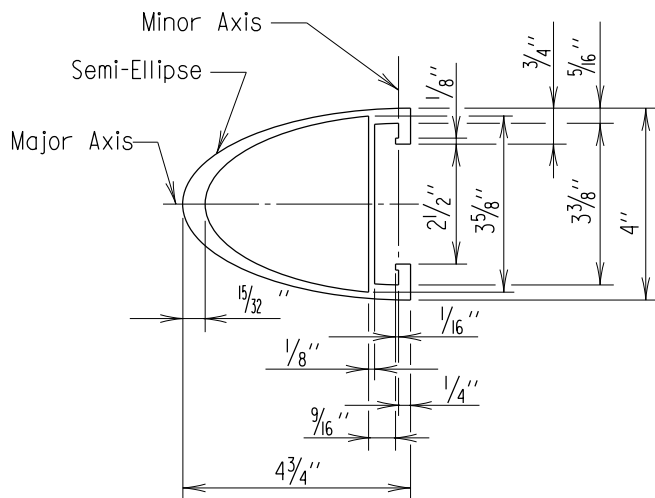
SHEET 5 OF 7



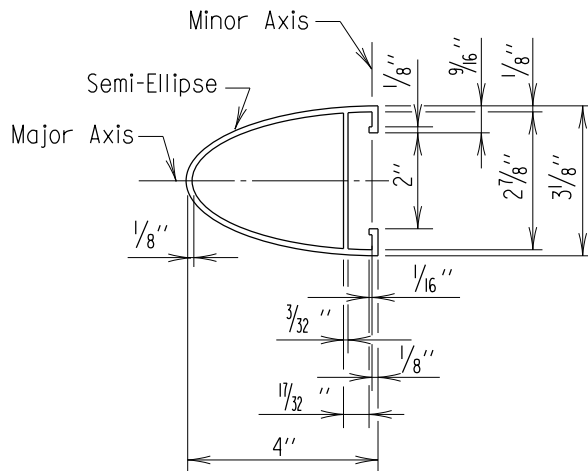
**ANCHOR PLATE**  
Scale: 1 1/2" = 1'-0"



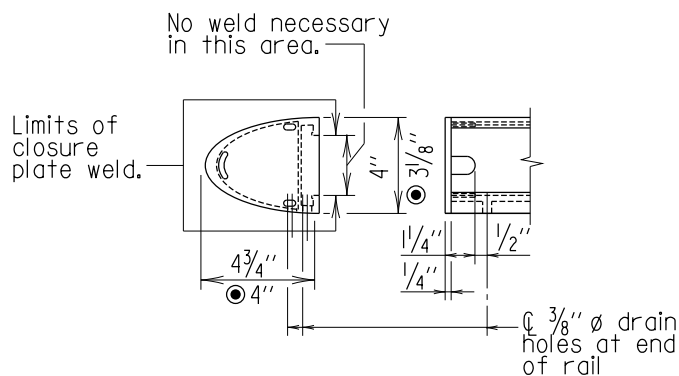
**RIVET**  
Scale: 6" = 1'-0"



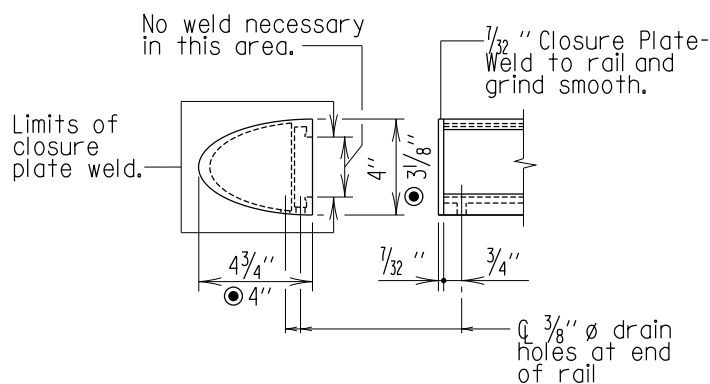
**RAIL MEMBER**  
Scale: None



**HANDRAIL MEMBER**  
Scale: None



**CAST RAIL END CAP**  
Scale: 1 1/2" = 1'-0"



**RAIL END PLATE**  
Scale: 1 1/2" = 1'-0"

**Note:**

At Contractor's option, cast rail end caps may be substituted for rail end plates.

Open ends of all Handrails shall be closed.

Dimensions indicated thus  $\odot$  apply to Handrail. Other dimensions apply to Rail.

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<i>[Signature]</i>	DIRECTOR
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FHWA APPROVAL	.
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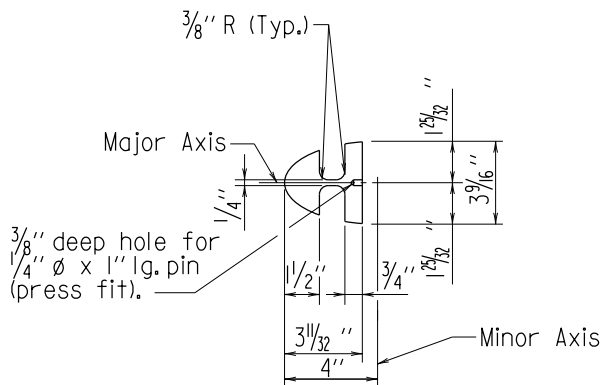
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MISCELLANEOUS DETAILS  
ALUMINUM BRIDGE RAILING

STANDARD NO. BR-SS(5.01)-76-35

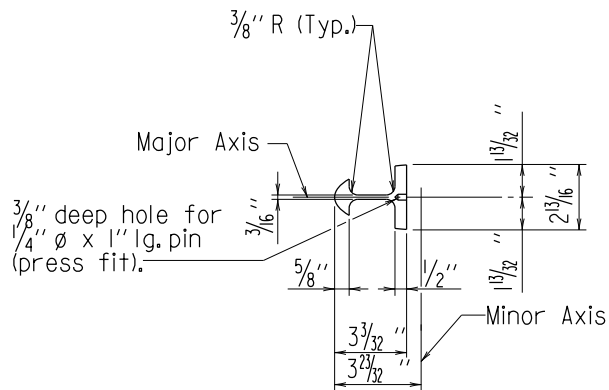
SHEET 6 OF 7

SUPER-RAILING BARRIER



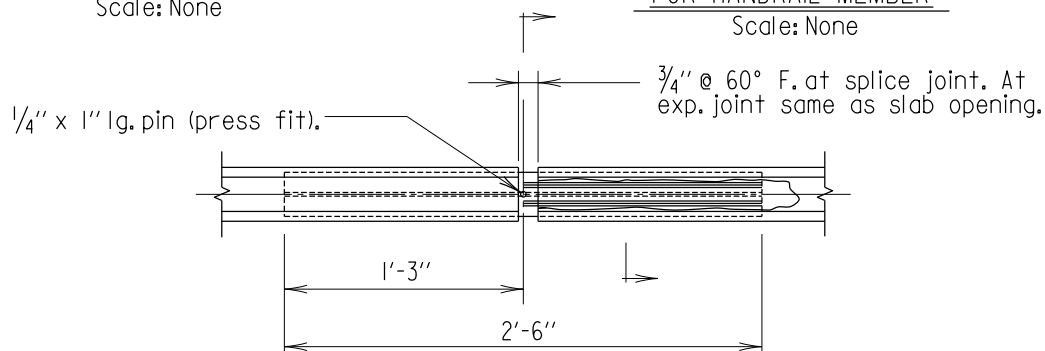
SECTION THRU SPLICE  
AND/OR EXPANSION BAR  
FOR RAIL MEMBER

Scale: None



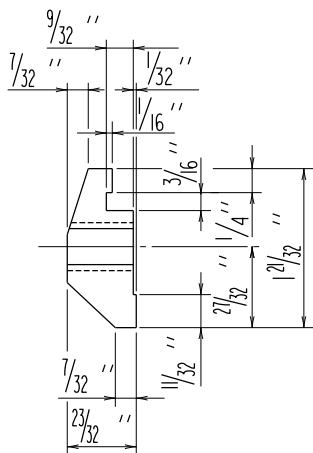
SECTION THRU SPLICE  
AND/OR EXPANSION BAR  
FOR HANDRAIL MEMBER

Scale: None

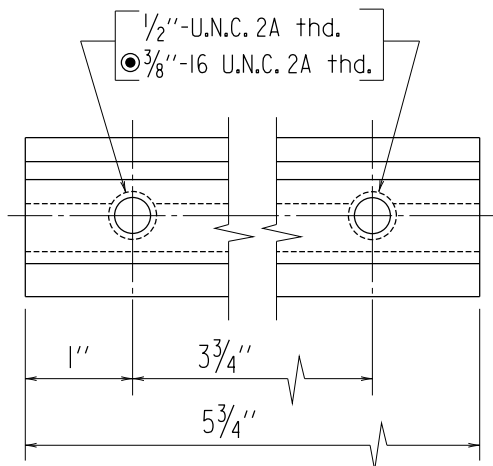


ELEVATION  
JOINT DETAIL

Scale: None

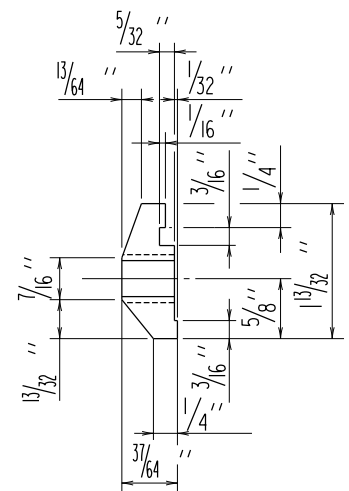


RAIL MEMBER  
SECTION



ELEVATION - CLAMP BAR DETAILS

Scale: 6"=1'-0"



HANDRAIL MEMBER  
SECTION

(● Applies To Handrail Only.)

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MISCELLANEOUS DETAILS  
ALUMINUM BRIDGE RAILING

STANDARD NO. BR-SS(5.01)-76-35

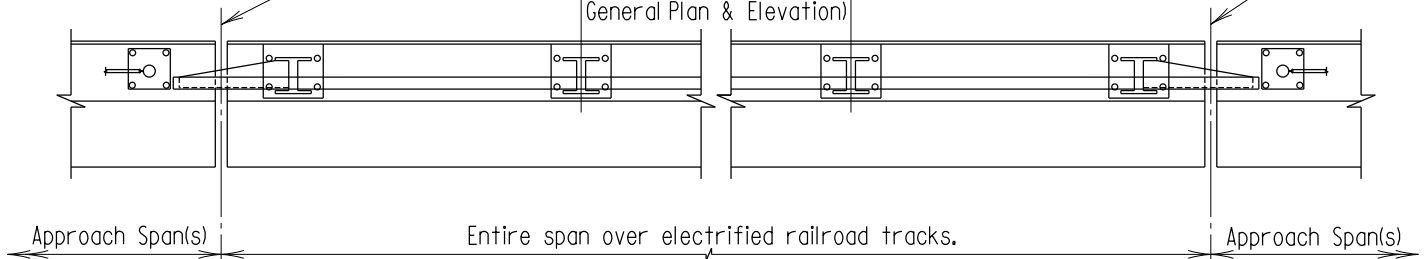
SHEET 1 OF 1

SUPER-RAILING BARRIER

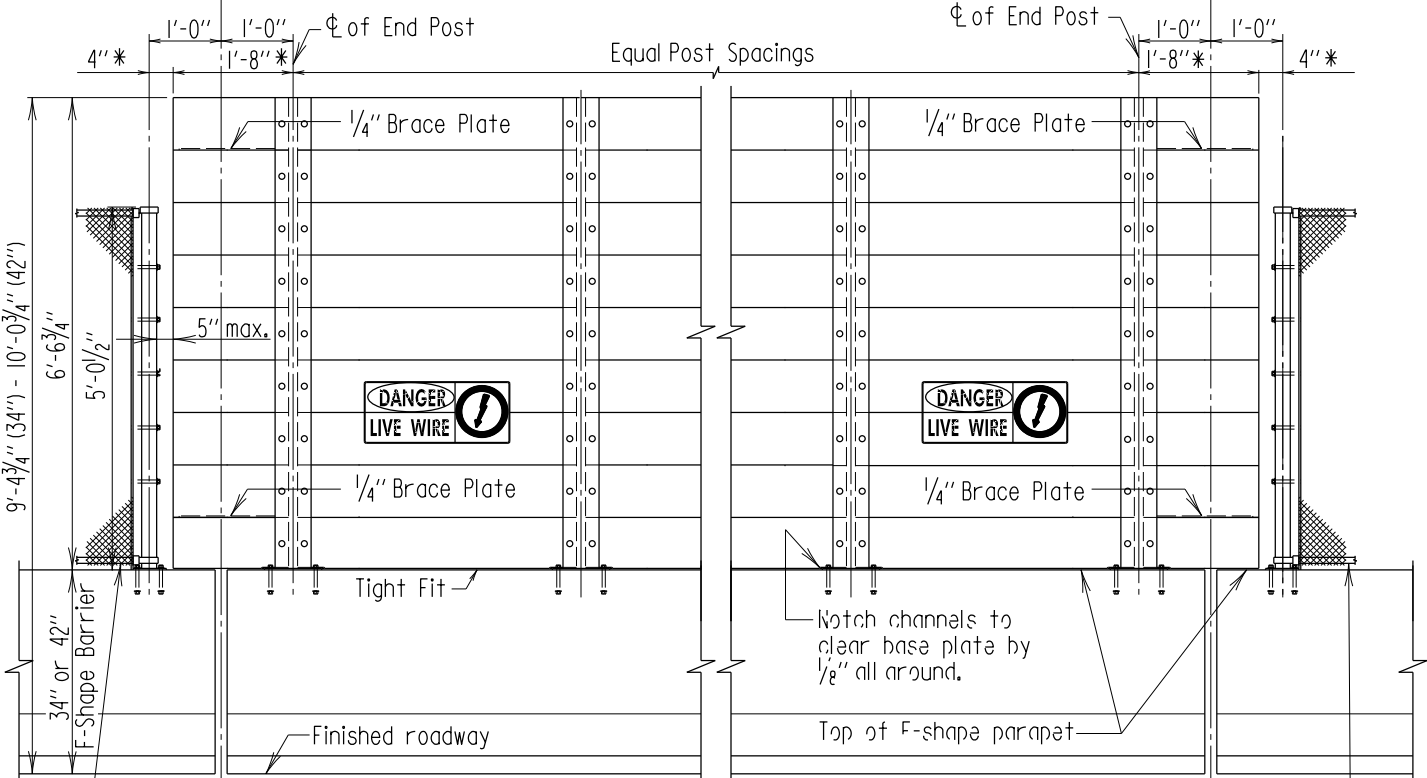
Ø of Parapet Opening and/or  
Ø of pier, or as designated on  
General Plan and Elevation Sheet.

Ø of Parapet Opening and/or  
Ø of pier, or as designated on  
General Plan and Elevation Sheet.

Maximum Post Spacing 8'-0"  
(For exact spacing see  
General Plan & Elevation)



PLAN  
Scale:  $\frac{3}{8}" = 1'-0"$



Std. S.H.A. Type II Safety  
fence on adjacent spans (only if  
indicated on Typical Section).

Note: All posts normal to  
top of parapet

Std. S.H.A. Type II Safety  
fence on adjacent spans (only if  
indicated on Typical Section).

INSIDE - ELEVATION  
Scale:  $\frac{3}{8}" = 1'-0"$

Note:

- All shapes and plates (except anchor plates) to be aluminum Designation 6061-T6.
- Material for anchor studs shall conform to A.S.T.M. Designation: A-276, Type 430 or Type 304 Stainless Steel, annealed, hot-finished, ultimate strength 70,000 p.s.i. min. 20% min. elongation. Threads to be rolled and not cut.
- Material for anchor plates shall be steel conforming to A.S.T.M. Designation: A-36 epoxy coated.
- All hardware not specifically called for on any detail shall be stainless steel A.S.T.M. A-304.

\* For both spans fixed at this support;  
for expansion increase 4" dimension  
and reduce 1'-8" dimension as necessary.  
(Maximum clear opening 5").

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<i>L.S. Friedman</i>	DIRECTOR
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DATE: 9/15/77	
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12-15-82	11-29-85
6-7-88	6-8-90
10-26-01	
FHWA APPROVAL	3-4-04
DATE: 9-15-77	

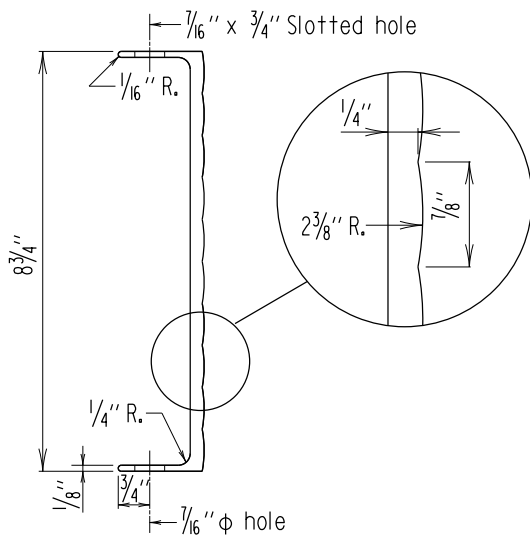
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PROTECTIVE BARRIER FOR PORTION OF  
BRIDGE OVER ELECTRIFIED RAILROAD  
WITH F-SHAPE PARAPET

STANDARD NO. BR-SS(5.02)-76-55

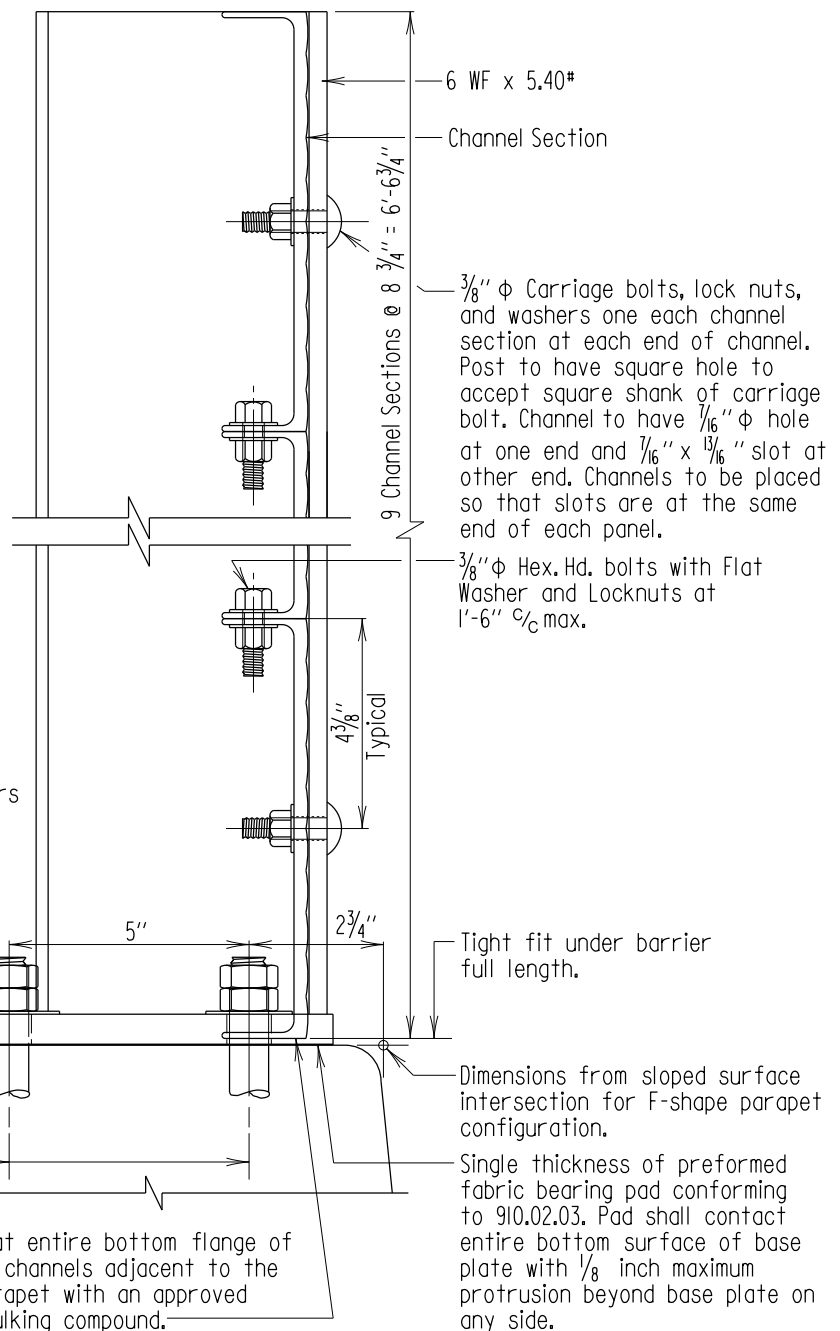
SHEET 1 OF 4

SUPER - RAILING - BARRIER



### CHANNEL SECTION

Scale: 3" = 1'-0"



### TYPICAL SECTION AT POST

Scale: 3" = 1'-0"

Concrete shall be finished as necessary to provide good barrier alignment at posts and barrier. If finished surface is not acceptable to the Engineer, then grinding shall be performed at no additional cost to the Administration.

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10-9-07	.
5-13-13	.

FHWA APPROVAL  
DATE: 7-21-77

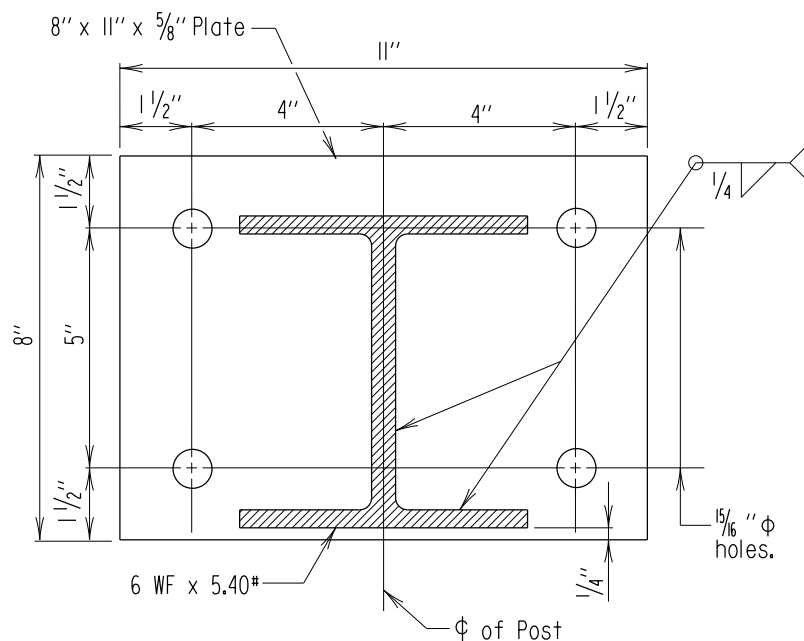
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PROTECTIVE BARRIER FOR PORTION OF  
BRIDGE OVER ELECTRIFIED RAILROAD  
WITH F-SHAPE PARAPET

STANDARD NO. BR-SS(5.02)-76-55

SHEET 2 OF 4

SUPER - RAILING - BARRIER



### BASE PLATE DETAIL

Scale: 3" = 1'-0"

Technical drawing of a parapet cross-section showing dimensions and components. The drawing includes the following labels and dimensions:

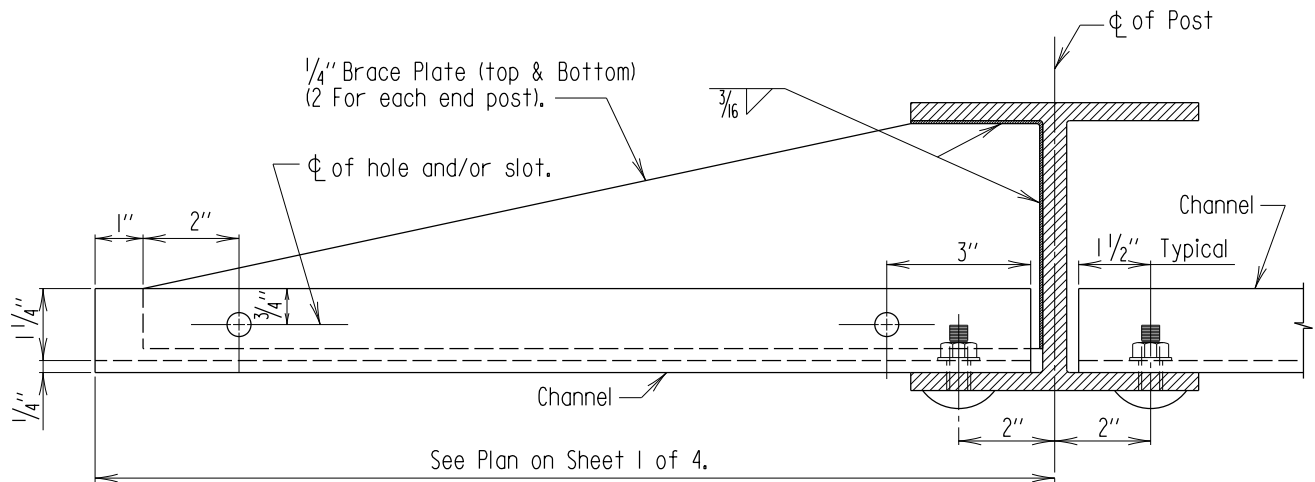
- Dimensions from sloped surface intersection for F-shape parapet configuration:**
  - 5"
  - $2 \frac{3}{4}"$
  - $1 \frac{1}{2}"$
- Inside face of parapet.**
- $\frac{1}{4}" \times 3" \times 7"$  Anchor Plate Epoxy Coated.**
- Dimensions from sloped surface intersection for F-shape parapet configuration:**
  - $1 \frac{1}{4}"$
  - 1"

Scale: 3'' = 1'-0''

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	6-7-88	6-8-90
	10-26-01	.
FHWA APPROVAL	3-4-04	.
DATE: 6-8-90	10-9-07	.

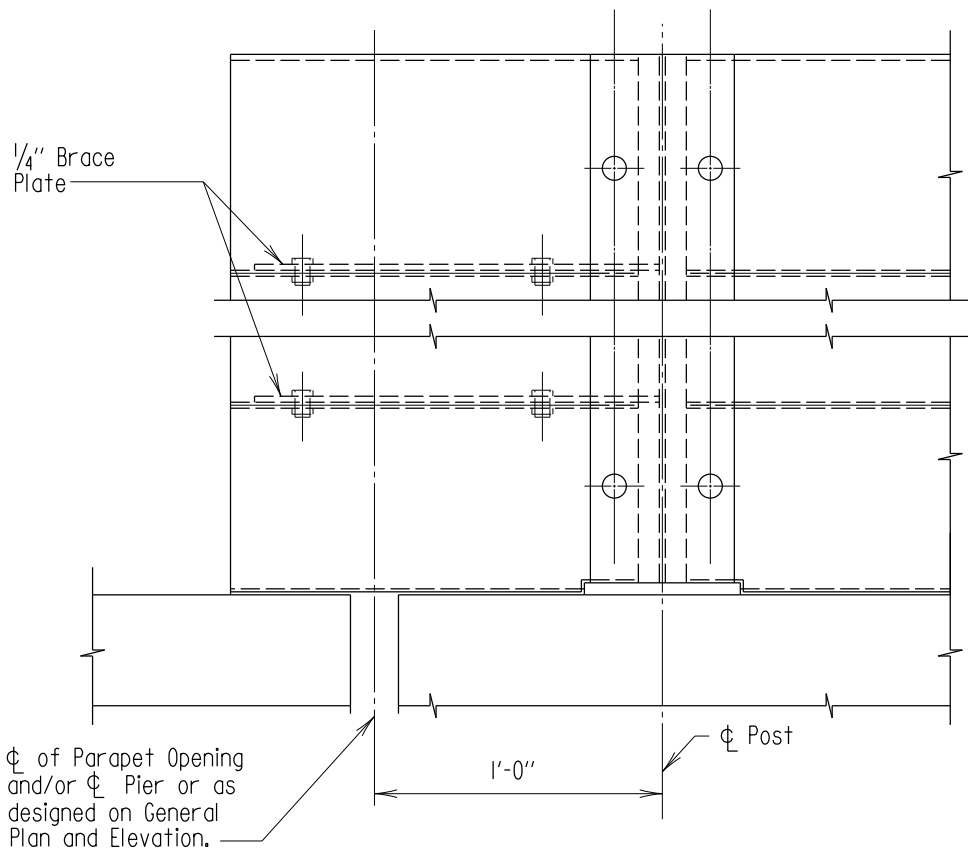
# PROTECTIVE BARRIER FOR PORTION OF BRIDGE OVER ELECTRIFIED RAILROAD WITH F-SHAPE PARAPET

SHEET 3 OF 4



### END POST CONNECTIONS

Scale: 3" = 1'-0"



### END POST ELEVATION

Scale: 3" = 1'-0"

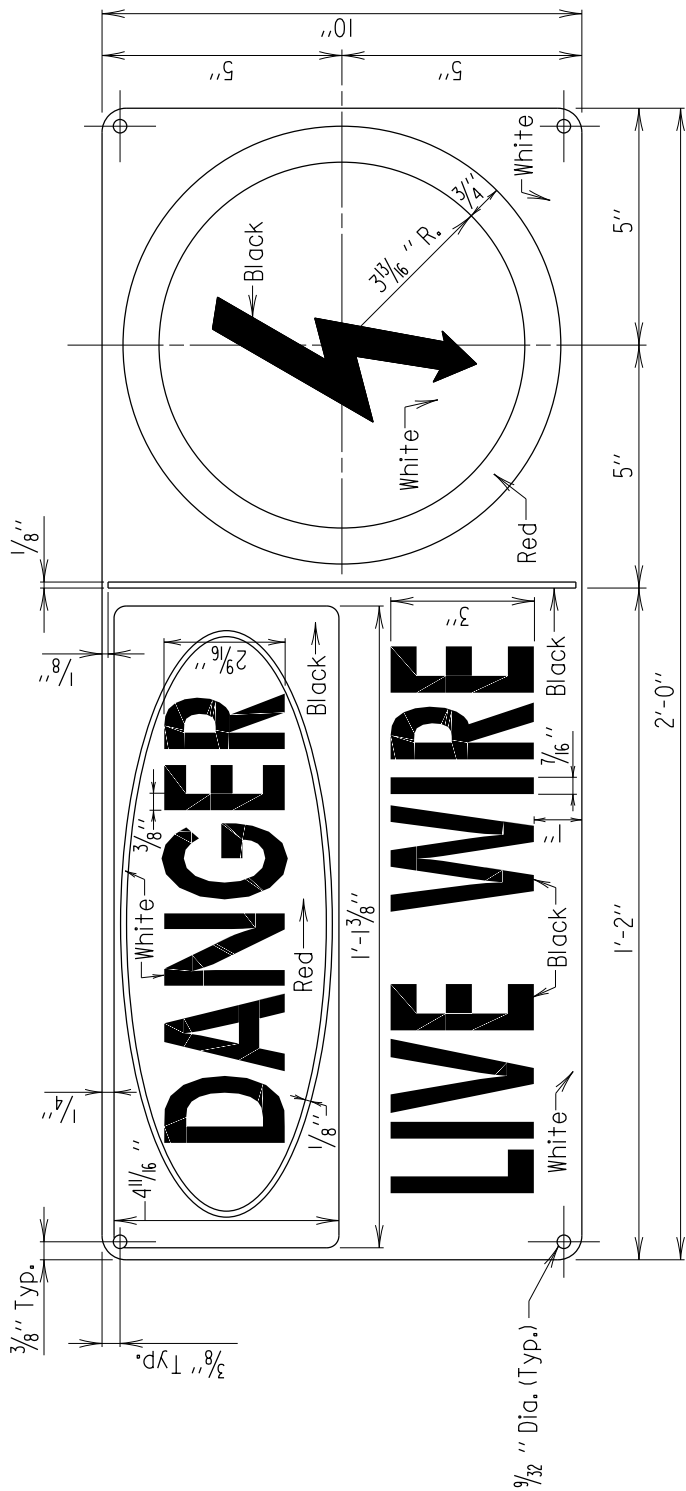
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<i>L.S. Hudson</i>	DIRECTOR
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6-8-90	6-8-90
10-26-01	.
3-4-04	.
FHWA APPROVAL	.
DATE: 7-21-77	.

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PROTECTIVE BARRIER FOR PORTION FOR  
BRIDGE OVER ELECTRIFIED RAILROAD  
WITH F-SHAPE PARAPET

STANDARD NO. BR-SS(5.02)-76-55

SHEET 4 OF 4

SUPER - RAILING - BARRIER



PLAN  
Scale: 3" = 1'-0"

Notes:

1. Sign to be made of 0.04 thick aluminum, rounded corners.
2. Solvent-clean and pretreat all surfaces with a wash primer conforming to MIL-C-15328. Follow with a zinc primer meeting Federal Specification TT-P-1757 or TT-P-645. Finish coat may be oil, alkyd, vinyl or epoxy paint that does not contain lead in its pigment.
3. Letters to be on front only. Size to be as shown.
4. Back of sign to be mill finish.
5. Holes to be provided with nicked brass eyelets to permit securing of signs with 1/4" x 3/4" Lg. Stainless Steel Hex. Hd. cap screws, washers and locknuts. Burr threads after installation (where applicable). If attached to concrete suitable anchor insert shall be used.
6. Signs on protective barrier to be fastened 5'-0" above area adjacent to the parapet.
7. Cost of furnishing and installing the signs to be included in the price for Protective Barrier.

FHWA APPROVAL  
DATE: 11-29-85

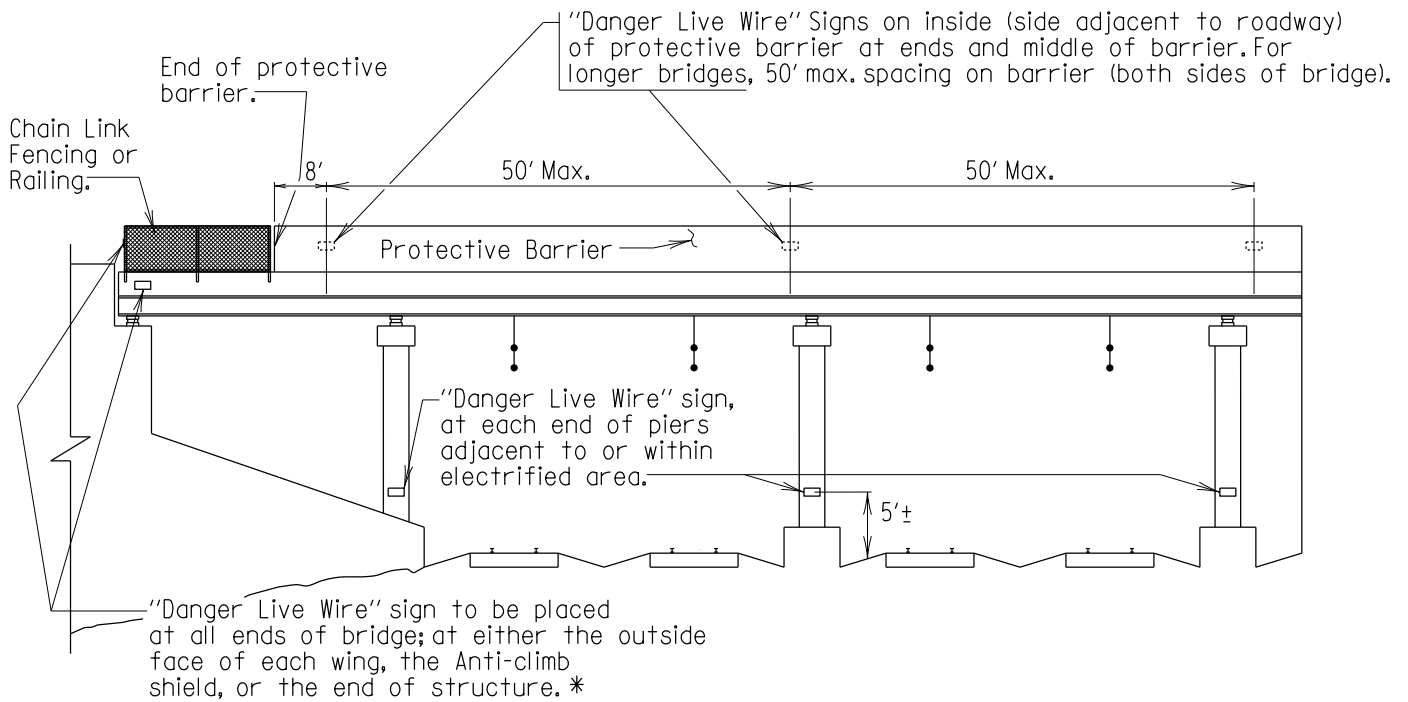
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<i>E.S. Fisher</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 1/11/83	
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STANDARD NO. BR-SS(5.04)-82-141

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

ELECTRIFIED TERRITORY  
DANGER SIGN

SHEET 1 OF 2



### OVERHEAD BRIDGES

Scale: None

\* Where structure is of multispan configuration and end of bridge is a considerable distance from electrified areas (over 200' from electrified span) additional signs shall be placed in spans just adjacent to electrified span(s).

APPROVAL	
<i>E. S. Fisher</i> DIRECTOR OFFICE OF STRUCTURES	
DATE: 1/11/83	
REVISIONS	
SHA	FHWA
.	.
.	.
FHWA APPROVAL	.
DATE: 11-29-85	.

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

ELECTRIFIED TERRITORY  
DANGER SIGN

STANDARD NO. BR-SS(5.04)-82-141

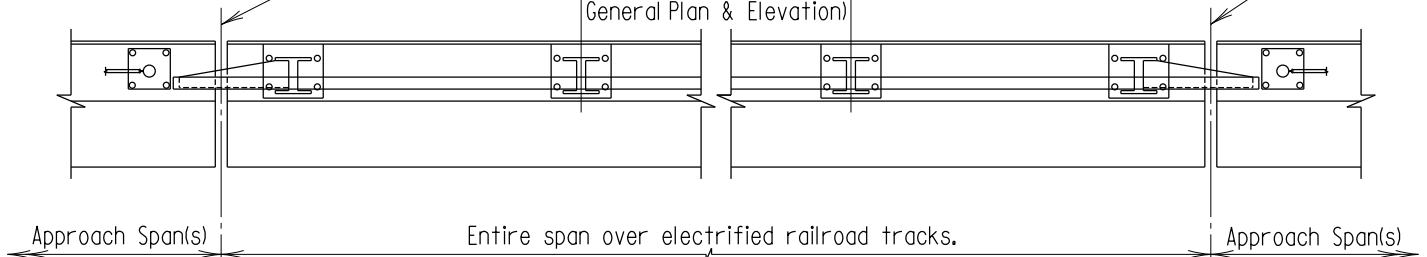
SHEET 2 OF 2

SUPER - RAILING - BARRIER

Ø of Parapet Opening and/or  
Ø of pier, or as designated on  
General Plan and Elevation Sheet.

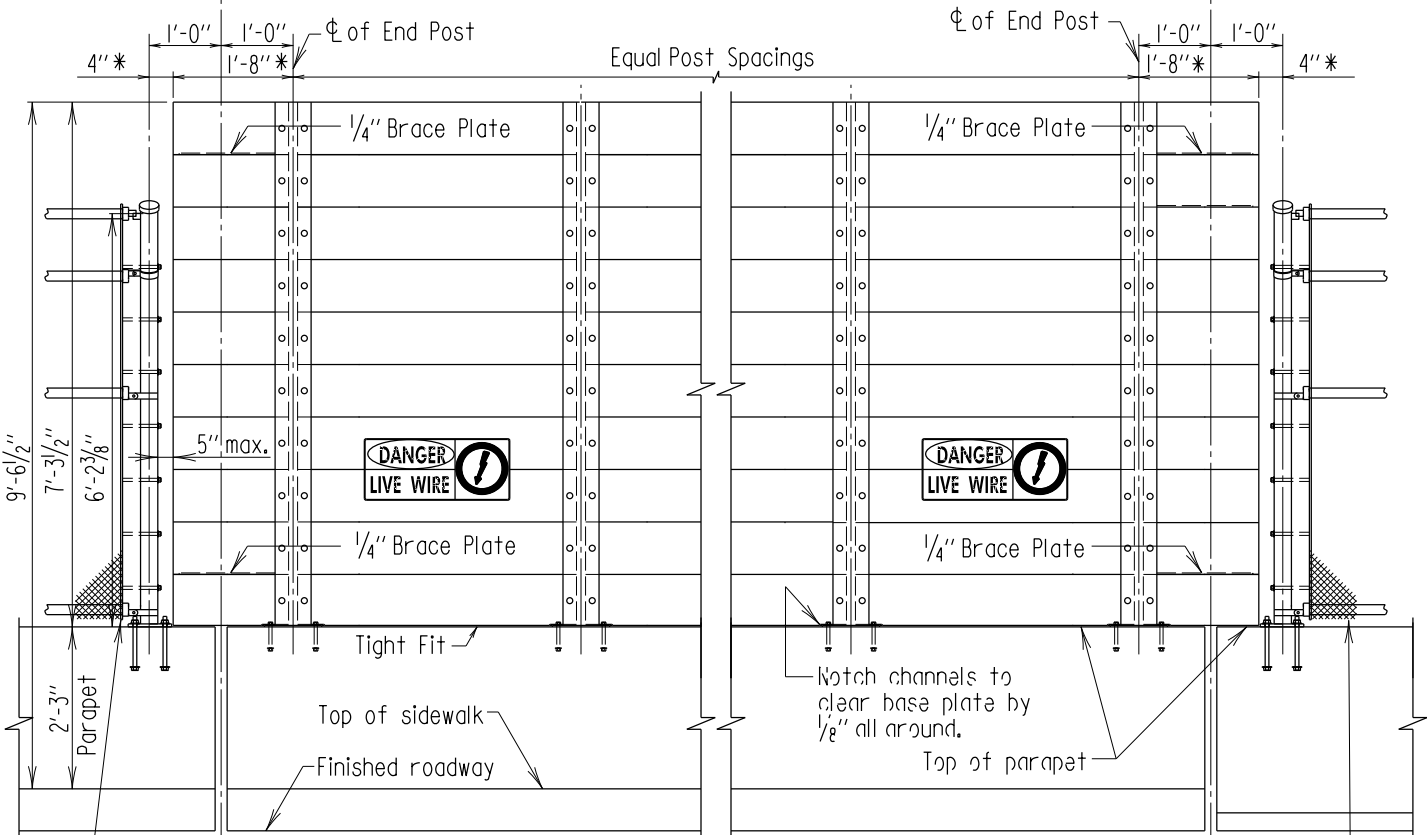
Ø of Parapet Opening and/or  
Ø of pier, or as designated on  
General Plan and Elevation Sheet.

Maximum Post Spacing 8'-0"  
(For exact spacing see  
General Plan & Elevation)



### PLAN

Scale:  $\frac{3}{8}" = 1'-0"$



Std. S.H.A. Type I Safety  
fence on adjacent spans (only if  
indicated on Typical Section).

Note: All posts normal to  
top of parapet

Std. S.H.A. Type I Safety  
fence on adjacent spans (only if  
indicated on Typical Section).

### INSIDE - ELEVATION

Scale:  $\frac{3}{8}" = 1'-0"$

\* For both spans fixed at this support;  
for expansion increase 4" dimension  
and reduce 1'-8" dimension as necessary.  
(Maximum clear opening 5").

Note:

- All shapes and plates (except anchor plates) to be aluminum Designation 6061-T6.
- Material for anchor studs shall conform to A.S.T.M. Designation: A-276, Type 430 or Type 304 Stainless Steel, annealed, hot-finished, ultimate strength 70,000 p.s.i. min. 20% min. elongation. Threads to be rolled and not cut.
- Material for anchor plates shall be steel conforming to A.S.T.M. Designation: A-36 epoxy coated.
- All hardware not specifically called for on any detail shall be stainless steel A.S.T.M. A-304.

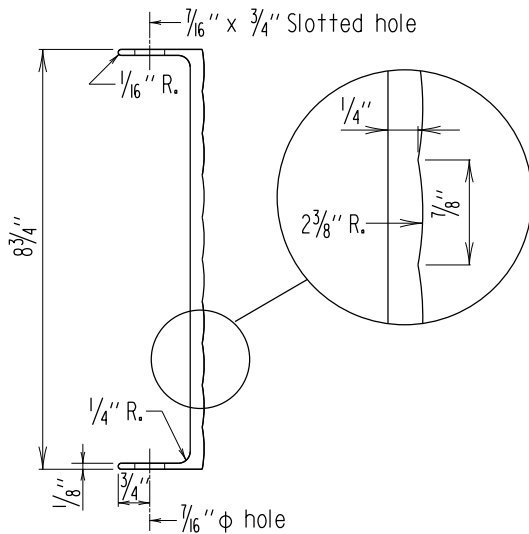
APPROVAL	
<i>E.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 3/2/04	
REVISIONS	
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FHWA APPROVAL	
DATE:	

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

PROTECTIVE BARRIER FOR PORTION OF  
BRIDGE OVER ELECTRIFIED RAILROAD WITH SIDEWALK

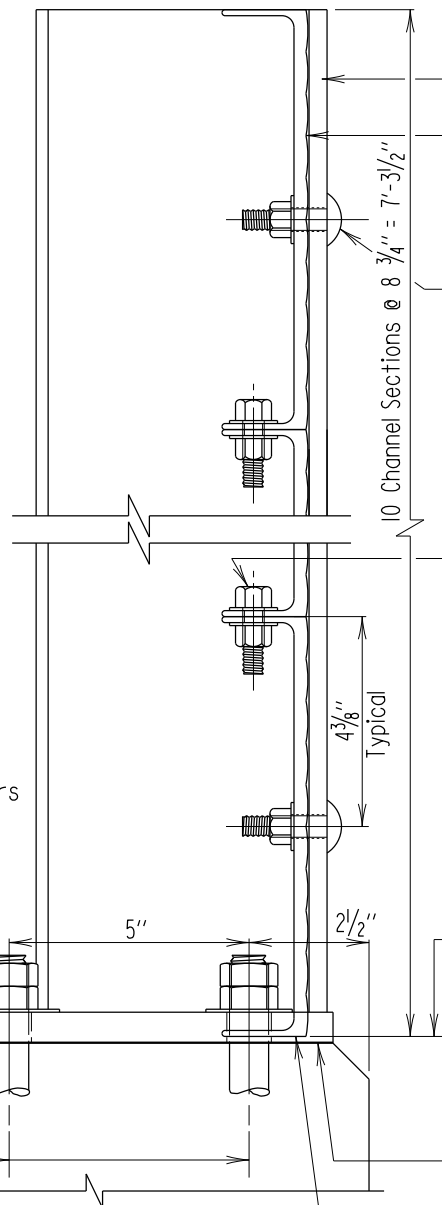
STANDARD NO. BR-SS(5.06)-04-360

SHEET 1 OF 4



### CHANNEL SECTION

Scale: 3" = 1'-0"



### TYPICAL SECTION AT POST

Scale: 3" = 1'-0"

Double hex. nuts with lock washers (Nuts to be A.S.T.M. B-211 alloy 6061-T6 or alloy 6262-T9 and washer shall be Designated A.S.T.M. B-209 Aluminum Alloy Alclad 2024-T4).

3/8"  $\phi$  Carriage bolts, lock nuts, and washers one each channel section at each end of channel. Post to have square hole to accept square shank of carriage bolt. Channel to have 1/16"  $\phi$  hole at one end and 7/16" x 13/16" slot at other end. Channels to be placed so that slots are at the same end of each panel.

3/8"  $\phi$  Hex. Hd. bolts with Flat Washer and Locknuts at 1'-6" c/c max.

Tight fit under barrier full length.

Single thickness of preformed fabric bearing pad conforming to 910.02.03. Pad shall contact entire bottom surface of base plate with 1/8" inch maximum protrusion beyond base plate on any side.

Concrete shall be finished as necessary to provide good barrier alignment at posts and barrier. If finished surface is not acceptable to the Engineer, then grinding shall be performed at no additional cost to the Administration.

Coat entire bottom flange of all channels adjacent to the parapet with an approved caulking compound.

Bridge Parapet

3/4" Anchor Studs

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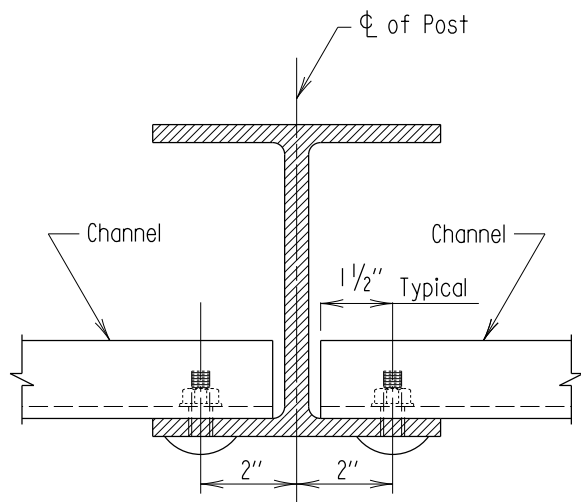
PROTECTIVE BARRIER FOR PORTION OF  
BRIDGE OVER ELECTRIFIED RAILROAD WITH SIDEWALK

STANDARD

SHEET 2 OF 4

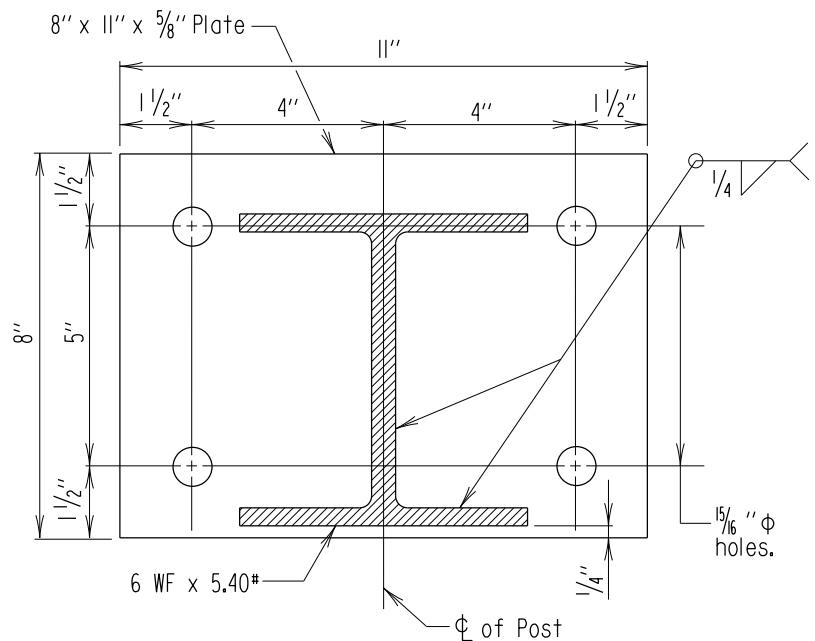
10-9-07  
4-15-11

SUPER - RAILING - BARRIER



INTERMEDIATE POST CONNECTION

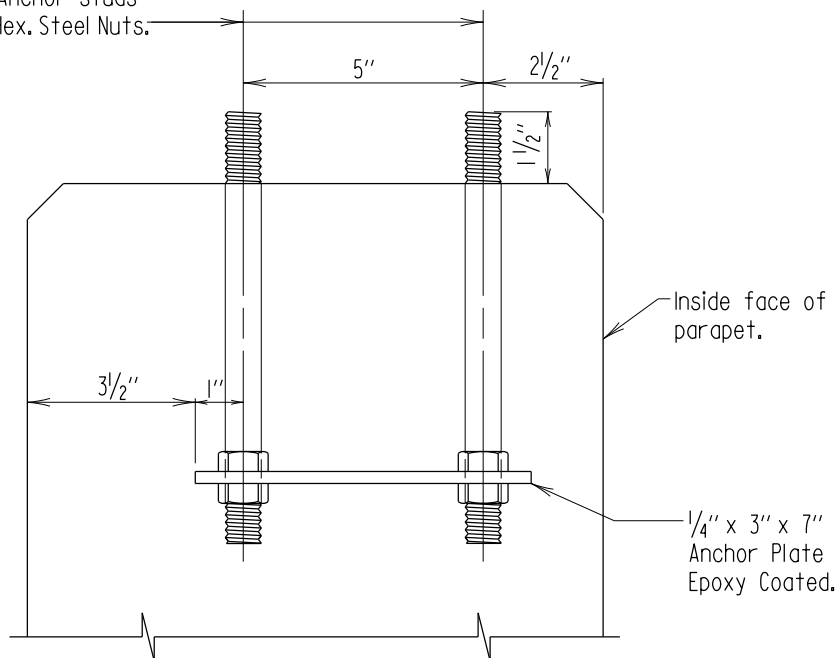
Scale: 3" = 1'-0"



BASE PLATE DETAIL

Scale: 3" = 1'-0"

(2)  $\frac{3}{4}$ "  $\phi$  x 9" Lg. Anchor studs  
with  $\frac{3}{4}$ " - 11 thd. Hex. Steel Nuts.



ANCHORAGE DETAIL

Scale: 3" = 1'-0"

APPROVAL	
<i>L.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 3/2/04	
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.	.
FHWA APPROVAL	.
DATE:	.

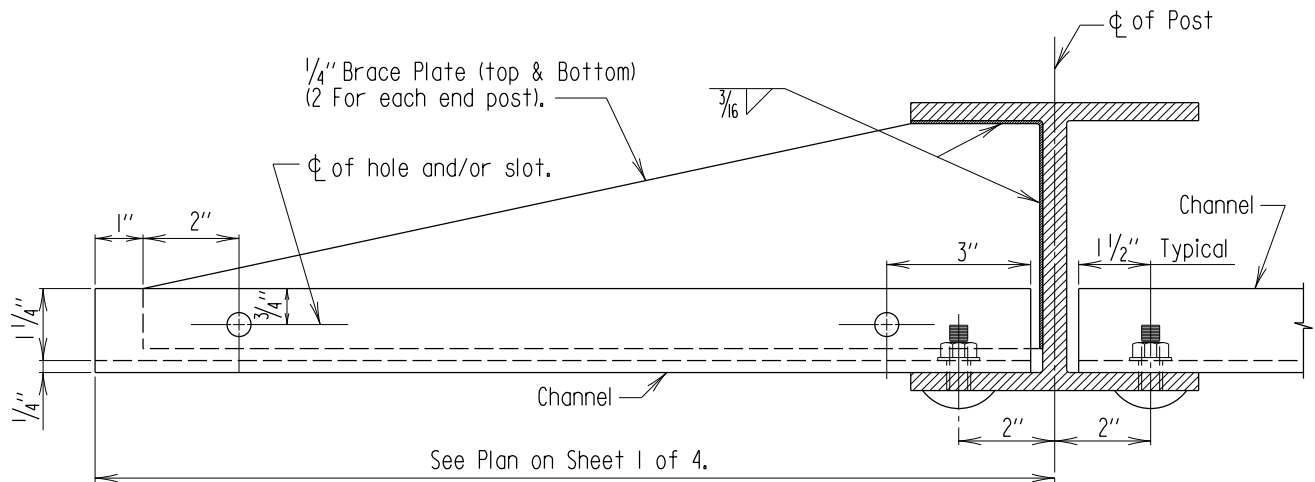
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STATE HIGHWAY ADMINISTRATION  
OFFICE OF STRUCTURES

PROTECTIVE BARRIER FOR PORTION OF  
BRIDGE OVER ELECTRIFIED RAILROAD WITH SIDEWALK

STANDARD NO. BR-SS(5.06)-04-360

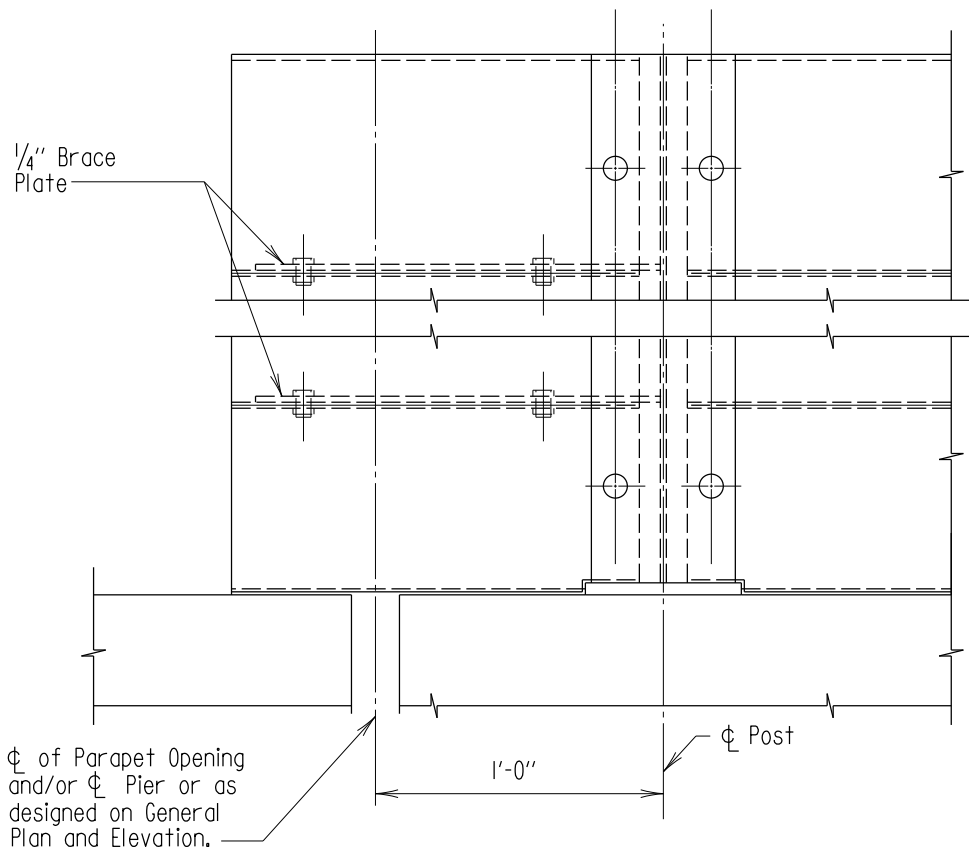
SHEET 3 OF 4

SUPER-RAILING-BARRIER



### END POST CONNECTIONS

Scale: 3" = 1'-0"



### END POST ELEVATION

Scale: 3" = 1'-0"

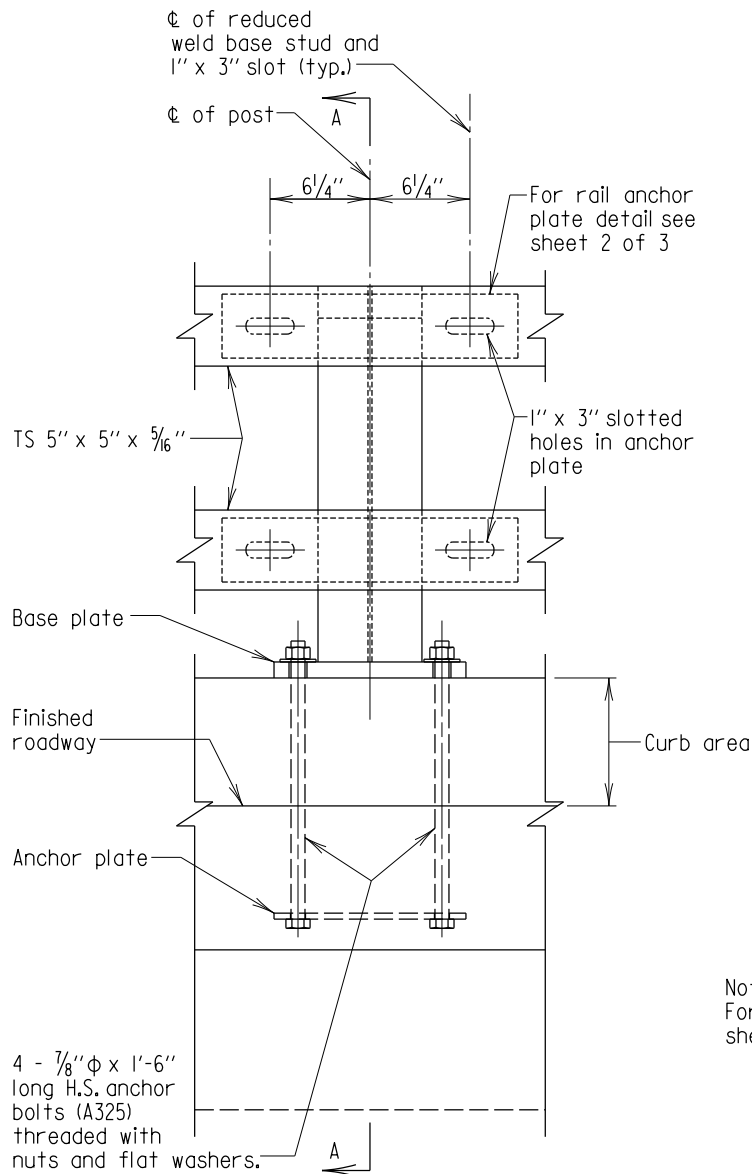
APPROVAL	
<i>L.S. Friedman</i>	DIRECTOR
OFFICE OF STRUCTURES	
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STATE OF MARYLAND  
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OFFICE OF STRUCTURES

PROTECTIVE BARRIER FOR PORTION FOR  
BRIDGE OVER ELECTRIFIED RAILROAD WITH SIDEWALK

STANDARD NO. BR-SS(5.06)-04-360

SHEET 4 OF 4



Note:  
 For Section A-A see  
 sheet 2 of 3.

### ELEVATION

Scale: 1" = 1'-0"

#### GENERAL NOTES:

1. All railings shall be fabricated and erected as indicated on the Plans.
2. Rails shall be parallel to the grade of the roadway. Rail sections shall be attached to as many posts as possible, but not less than two.
3. The center line of any splice and/or expansion joint shall be located at least 2'-0" away from center line of a post except where indicated otherwise on Plans. Expansion and/or splice joints for each strand of two strand railing shall be placed in the same location and in the same panel.
4. Rail elements shall be square structural tubing in accordance with ASTM A500 Grade B, A618 or A501.
5. Steel posts and plates shall conform to ASTM A36 unless otherwise noted.
6. Posts shall be set perpendicular to top of curb. For post spacing see Plans (Maximum 10'-0" Spacing).
7. All structural steel including fasteners shall be hot-dip galvanized as per ASTM A-123 after fabrication, except as noted.
8. All open ends of rails to be capped.
9. IN SETTING ANCHOR BOLTS BE SURE ENOUGH THREADS ARE EXPOSED SO THAT NUTS CAN BE COMPLETELY ATTACHED.

## TL-4 BRIDGE RAILING

#### Note:

For anchor bolt length and curb reinforcing details see standard no. BR-SS(6.59)-07-376 for bridge decks or BR-SS(6.60)-07-377 for precast slab panels.

APPROVAL	
<i>E. S. Fisher</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 2/8/07	
REVISIONS	
SHA	FHWA
11-26-07	.
1-12-10	.
FHWA APPROVAL	.
DATE:	.

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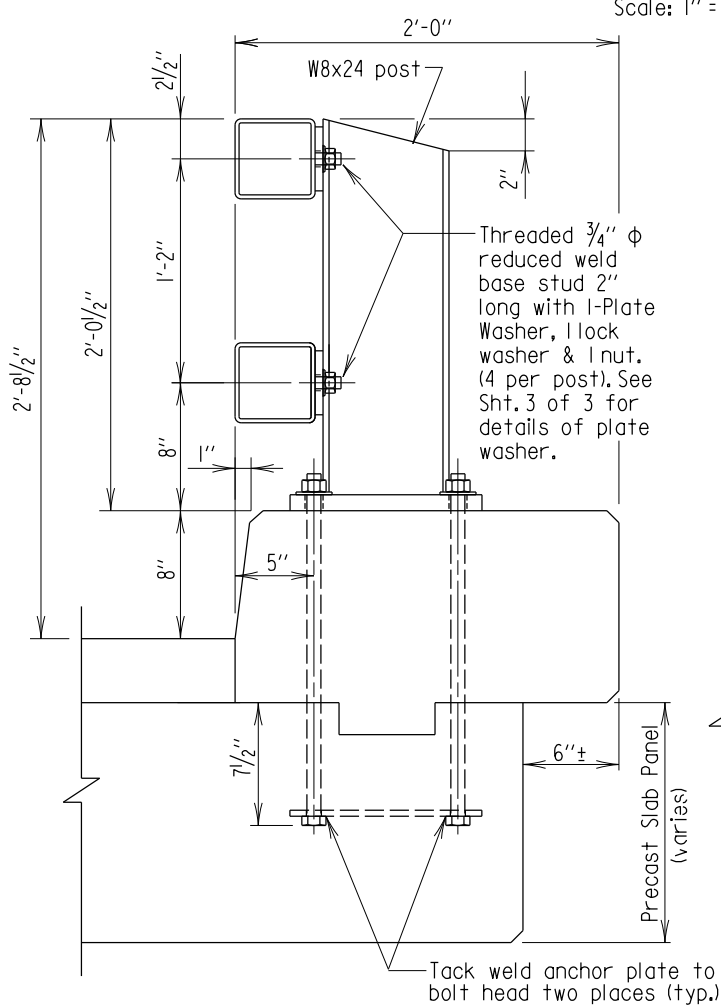
TWO STRAND STRUCTURAL TUBE RAIL  
 CURB MOUNTED - ELEVATION

STANDARD NO. BR-SS(5.07)-07-375

SHEET 1 OF 3

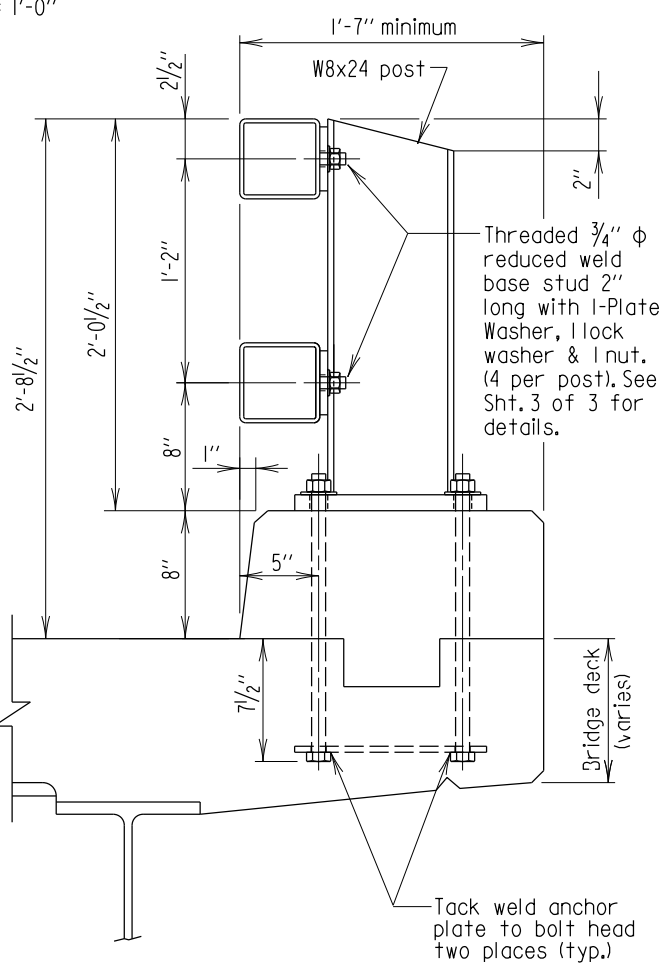
ELEVATION - RAIL ANCHOR PLATE DETAIL

Scale: 1" = 1'-0"



SECTION A-A (PRECAST SLAB PANEL)

Scale: 1" = 1'-0"



SECTION A-A (BRIDGE DECK)

Scale: 1" = 1'-0"

## TL-4 BRIDGE RAILING

APPROVAL	
<u>C.S. Freedom</u> DIRECTOR OFFICE OF STRUCTURES	
DATE: 2/8/07	
REVISIONS	
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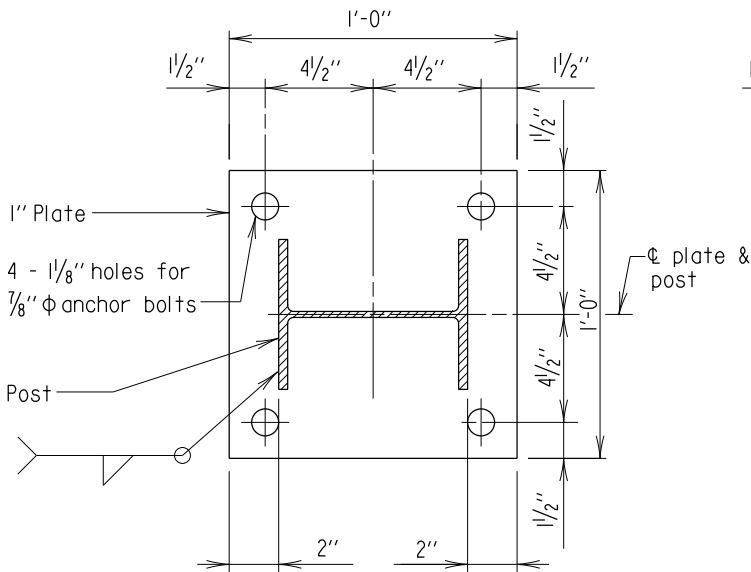
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TWO STRAND STRUCTURAL TUBE RAIL  
CURB MOUNTED - DETAILS

STANDARD NO. BR-SS(5.07)-07-375

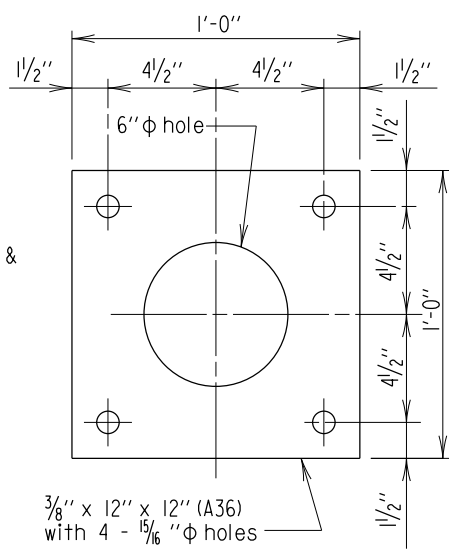
SHEET 2 OF 3

SUPER-RAILING-BARRIER



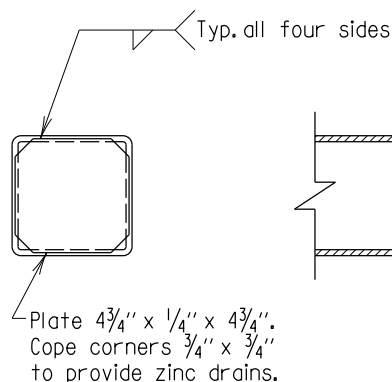
PLAN  
BASE PLATE DETAIL

Scale: 3" = 1'-0"



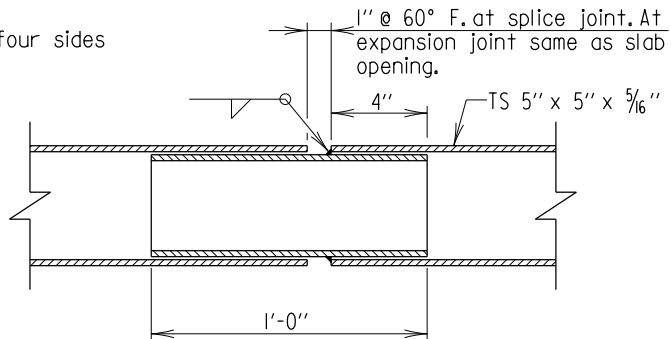
PLAN  
ANCHOR PLATE DETAIL

Scale: 3" = 1'-0"



RAIL CAP DETAIL

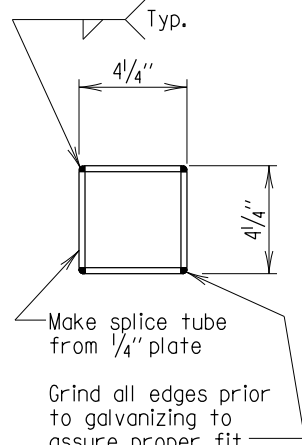
Scale: 3" = 1'-0"



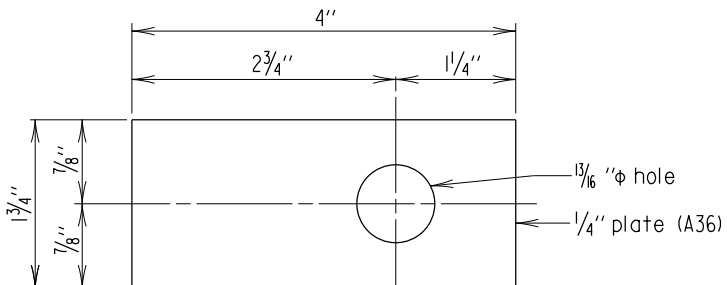
PLAN

RAIL SPLICE DETAILS

Scale: 3" = 1'-0"



SECTION - SPLICE TUBE



PLAN

PLATE WASHER

Scale: 6" = 1'-0"

Note:  
Position washers to completely cover slotted hole.

## TL-4 BRIDGE RAILING

APPROVAL	
<i>E. S. Fisher</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 2/8/07	
REVISIONS	
SHA	FHWA
11-26-07	.
1-12-10	.
FHWA APPROVAL	.
DATE:	.

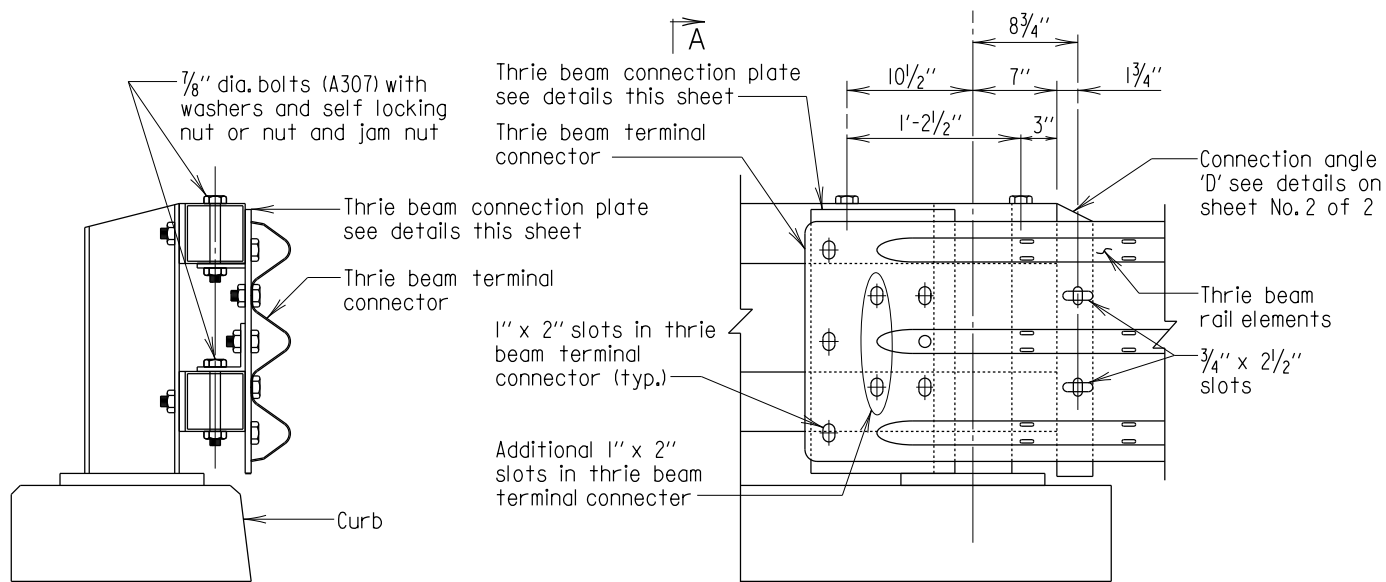
STATE OF MARYLAND  
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OFFICE OF STRUCTURES

TWO STRAND STRUCTURAL TUBE RAIL  
CURB MOUNTED - DETAILS

STANDARD NO. BR-SS(5.07)-07-375

SHEET 3 OF 3

SUPER-RAILING-BARRIER

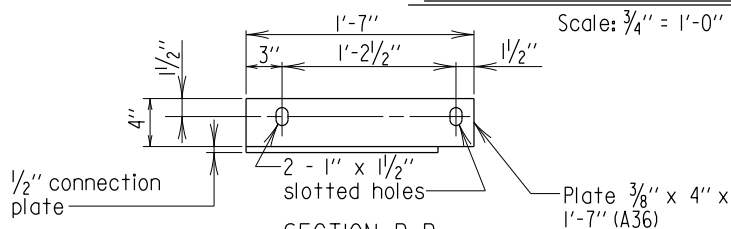


SECTION A-A

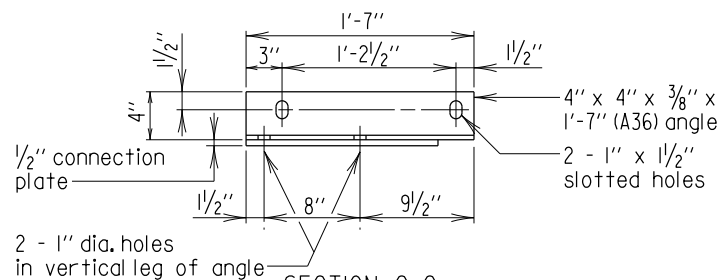
Scale:  $\frac{3}{4}" = 1'-0"$

TRANSITION CONNECTION ELEVATION

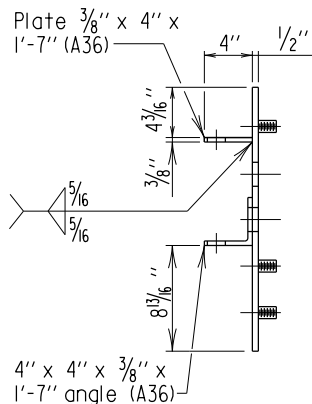
Scale:  $\frac{3}{4}" = 1'-0"$



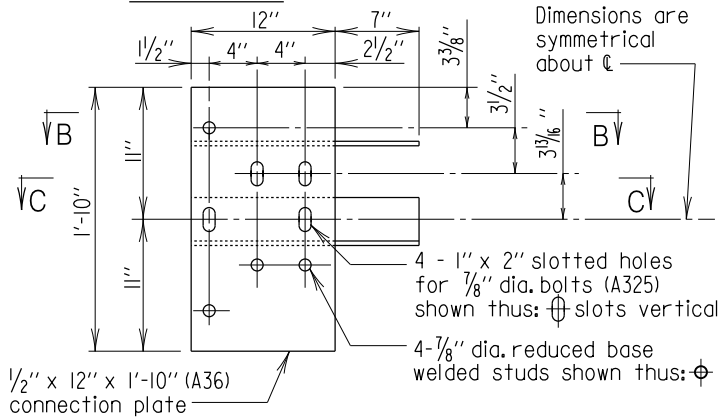
SECTION B-B



SECTION C-C



SECTION



ELEVATION

CONNECTION PLATE DETAILS

Scale:  $\frac{3}{4}" = 1'-0"$

Note:  
See Std. No. MD 605.51-01 for additional details.

APPROVAL	
<i>E. S. Fisher</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 2/28/07	
REVISIONS	
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FHWA APPROVAL	.
DATE:	.

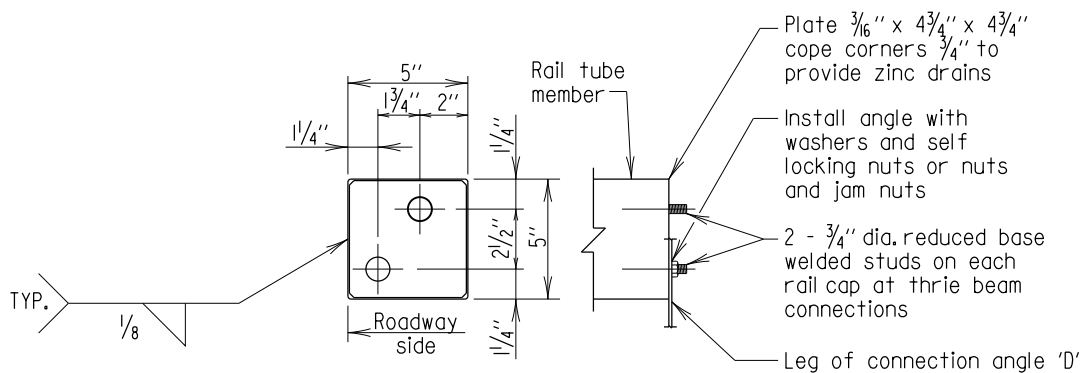
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THRIE BEAM CONNECTION PLATE

STANDARD NO. BR-SS(5.08)-07-384

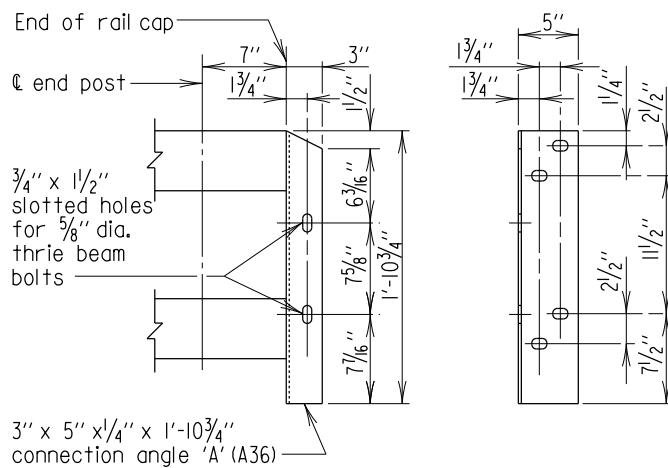
SHEET 1 OF 2

SUPER-RAILING-BARRIER



### RAIL CAP DETAIL

Scale: 1 1/2" = 1'-0"



### CONNECTION ANGLE 'D'

Scale: 3/4" = 1'-0"

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<i>E. S. Fisher</i>	DIRECTOR
OFFICE OF STRUCTURES	
DATE: 2/28/07	
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THRIE BEAM CONNECTION PLATE

STANDARD NO. BR-SS(5.08)-07-384

SHEET 2 OF 2

SUPER-RAILING-BARRIER